

CLAIMS

I claim:

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1. A display system comprising multiple display generators and a beam splitter to combine images from the display generators to enhance performance by direct view.
2. The display system of claim 1 in which the display generators are flat panel LCDs.
3. The display system of claim 2 in which the LCDs are identical and the polarization of the LCDs are at 45 degrees to the horizontal, whereby an image from one LCD transmitted through the beam splitter for viewing and the image from the other LCD which is reflected from the beam splitter will have linear polarization at right angles.
4. The display system of claim 3 in which polarizers are used to separate the images for right and left eye.
5. The display system of claim 4, wherein the polarizers are polarized lenses in eyeglass frames.

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6. The display system of claim 3, in which the polarization is modified by adding quarter wave plates, respectively, to the light paths from the LCDs so that the output light is separated by right and left circular polarized light.
7. The display system of claim 3, in which circular polarization is created by a single quarter wave plate added between the beam splitter and the eye of the viewer.

8. The display system of claim 2, in which a stereo pair makes up a selected region of the display generators.
9. The display system of claim 2, in which the display generators are disposed at right angles and are in the vertical planes.
10. The display system of claim 2, in which the display generator for direct viewing through the beam splitter is in the vertical plane and the display generator that is reflected in the beam splitter is in the horizontal plane.
11. The display system of claim 10; in which the stereo signal is received as a stereo pair and the display generator directly viewed through the beam splitter is in the vertical plane and is scanned from top to bottom and the display generator that is reflected by the beam splitter in the horizontal plane and is scanned from bottom top.
12. The display system of claim 10, in which the image signal for the reflected display generator in the horizontal plane is inverted top to bottom.
13. The display system of claim 2, in which the image signal for the reflected display generator is inverted from right to left electronically.
14. The display systems of claim 2, and in which a stereo signal is received as a stereo pair, one of the stereo pairs is provided to one display generator and the other of the stereo pairs is provided to the other display generator, and the display generator viewed through the beam splitter is scanned from left to right and the display generator that is reflected by the beam splitter for viewing is scanned from right to left.

15. The display system of claim 1 in which a field sequential signal is displayed such that alternate fields are displayed on two display generators so that each field is displayed for a full frame.

16. The display system of claim 1, in which the display generators are made up of red green and blue color sub pixels to form picture elements and/or arranged to overlay each other so as to minimize color halos and color fringes.

17. The display system of claim 16, wherein the directional organization of providing data to color sub pixels in one LCD is in one direction and the directional organization of providing data to color sub pixels in the other LCD is in the opposite direction.

18. The display system of claim 16 in which a field sequential signal is displayed such that alternate fields are displayed on two display generators so that each field is displayed for a full frame.

19. The display system of claim 1, further comprising a mount to position the display generators relative to each other in perpendicular planes.

20. The display system of claim 19, wherein the mount includes a mount for the beam splitter.

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21. The display system of claim 20, said mount including a cubical structure, the beam splitter being in the cubical structure and the cubical structure having open areas receiving light from the respective image generators and passing such light to the beam splitter.

22. The display system of claim 1, further comprising a light absorber for absorbing light from the beam splitter which is not directed to a viewer for viewing.

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23. The display system of claim 1, further comprising a package for containing the display generators and the beam splitter.

24. The display system of claim 23, said package comprising cover portions coupled by a hinge and movable to contain in protected relation the display generators and beam splitter and openable to provide access and use of the display generators and beam splitter.

25. The display system of claim 24, said cover portions being openable to permit arrangement of the display generators in perpendicular planes with the beam splitter therebetween.

26. The display system of claim 24, said cover portions being openable to permit arrangement of the display generators in parallel relation in a common plane.

27. The display system of claim 1, further comprising a data processing system for obtaining and organizing image data and presenting the image data for display.

28. The display system of claim 27, said data processing system including a processor, a memory and connections to the respective display generators.

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29. The display system of claim 28, further comprising operating software to invert the data for presentation to one of the display generators for displaying the data in inverted relation to the data displayed by the other display generator.

30. A packaged stereoscopic display system, comprising a pair of displays, a beam splitter, a package containing the displays and beam splitter, the package including a pair of cover portions and a hinge connecting the cover portions allowing the cover portions to be closed to contained in protected closed relation the displays and beam splitter, and to be opened to expose the displays and beam splitter in respective operative relation to present stereoscopic images for viewing.

31. A method of displaying stereo images, comprising simultaneously displaying a left image on a display and a right image on another display, and combining those images in a common light path.

32. The method of claim 31, further comprising discriminating the respective images using optical polarization.

33. The method of claim 31, wherein the images are color images, each being composed of an assemblage of lines of different respective colors, and wherein the color image from one display is an arrangement in a one sequence and the color image from the other display is in an arrangement in the opposite sequence.

34. A method of presenting a stereoscopic image for viewing, comprising presenting a left eye image on an image generator, presenting a right eye image on another image generator, combining in a substantially common light path the respective images.

35. The method of claim 34, further comprising discriminating between the left eye image and right eye image for viewing by respective left and right eyes the respective left and right eye images from the light in the common light path.

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C1 36. The method of claim 34, further comprising inverting the image data for one of the images for presenting for viewing in substantially superposed relation to the other eye image.

C 37. The method of claim 36, further comprising using a beam splitter to combine the images by transmitting one image and reflecting the other image.

38. The method of claim 34 further comprising using a beam splitter to combine the images by transmitting one image and reflecting the other image in the substantially common light path.

39. The method of claim 38, said inverting comprising inverting from top to bottom.

40. The method of claim 38, said inverting comprising inverting from left to right.

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